Air Quality

RMS AIR QUALITY CRITERIA

1. *Level of Severity (LOS) I occurs when projected demand for the resource will equal or exceed the capacity of the resource within a time period that allows for additional resource capacity to be developed. For air quality, LOS I occurs when:*

    a. *Air monitoring shows periodic but infrequent violations of the state ozone standard, with no area of the county designated by the state as a nonattainment area; and*

    b. *Emissions in the planning area approach 75% of the designated threshold level, and are projected to reach 100% within the next five years even with implementation of all emission reduction strategies identified in the Clean Air Plan (CAP) for San Luis Obispo County; and*

    c. *At least 50% of the available emission reductions in the planning area have been utilized through implementation of emission control measures approved through the CAP.*

2. *LOS II occurs when the time required to correct a resource deficiency just equals the projected time to consume the remaining resource capacity. For air quality, LOS II occurs when one of the following conditions occurs:*

   a. *Air monitoring shows one or more violations per year of the state ozone standard and the county, or a portion of it, has been designated by the state as nonattainment for ozone* ***(NOTE: This condition has been satisfied)****; or*

   b. *Emissions in the planning area reach 90% of the designated threshold; and are projected to reach 100% within the next three years; and*

   c. *At least 75% of the available emission reductions in the planning area have been utilized through implementation of emission control measures approved through the CAP.*

3. *LOS III occurs when resource demand equals resource capacity. For air quality, LOS III occurs when one of the following findings is made:*

   a. *Ambient air monitoring at any county monitoring station shows a violation(s) of the federal ozone standard on one or more days per year for three consecutive years, or such violations are projected to occur; or*

   b. *Emissions in the planning area equal or exceed a pollutant threshold level determined by regional ozone modeling; and*

   c. *All ozone control measures approved through the CAP have already been implemented in the planning area.*

SAN LUIS OBISPO AIR QUALITY CHARACTERISTICS

Three distinct air basins exist in San Luis Obispo county: the Coastal Plateau, Upper Salinas River Valley, and the East County Plain. Air quality characteristics differ among these regions, though the geography which separates them only marginally limits the transport of pollutants between them. Seventy five percent of the county's population and commercial and industrial facilities are found in the Coastal Plateau.

A complex interrelationship of factors affects air quality. Type, quantity, and location of pollutant emissions, regional geography, and prevailing meteorology determine emission levels and resultant dispersion patterns. The Pacific Ocean strongly affects meteorology within the county. Proximity to the ocean spares the coastal portions of the county from seasonal temperature extremes that occur inland. These temperature fluctuations dictate prevailing wind patterns as well as inversion layers. Typically, prevailing winds blow westerly. However, winds originating from the southeast

during so-called "Santa Ana" conditions may transport pollutants over the ocean for several days. As Santa Ana conditions disperse, pollutants accumulated offshore can return onshore to mix with existing emissions, resulting in high pollutant concentrations.

The State and Federal governments establish pollutant concentration standards based upon public health and welfare criteria. San Luis Obispo County is currently designated as "attainment" or "unclassified" for all pollutants regulated under the national air quality standards. However, the county is designated as a "non-attainment" area for the California PM10 (fine particulate matter) standard. Until February, 2004, the county was also designated “non-attainment” for ozone, as well. That designation was changed to ”attainment” following three years without exceedences of the state ozone standard.

EXISTING AIR QUALITY

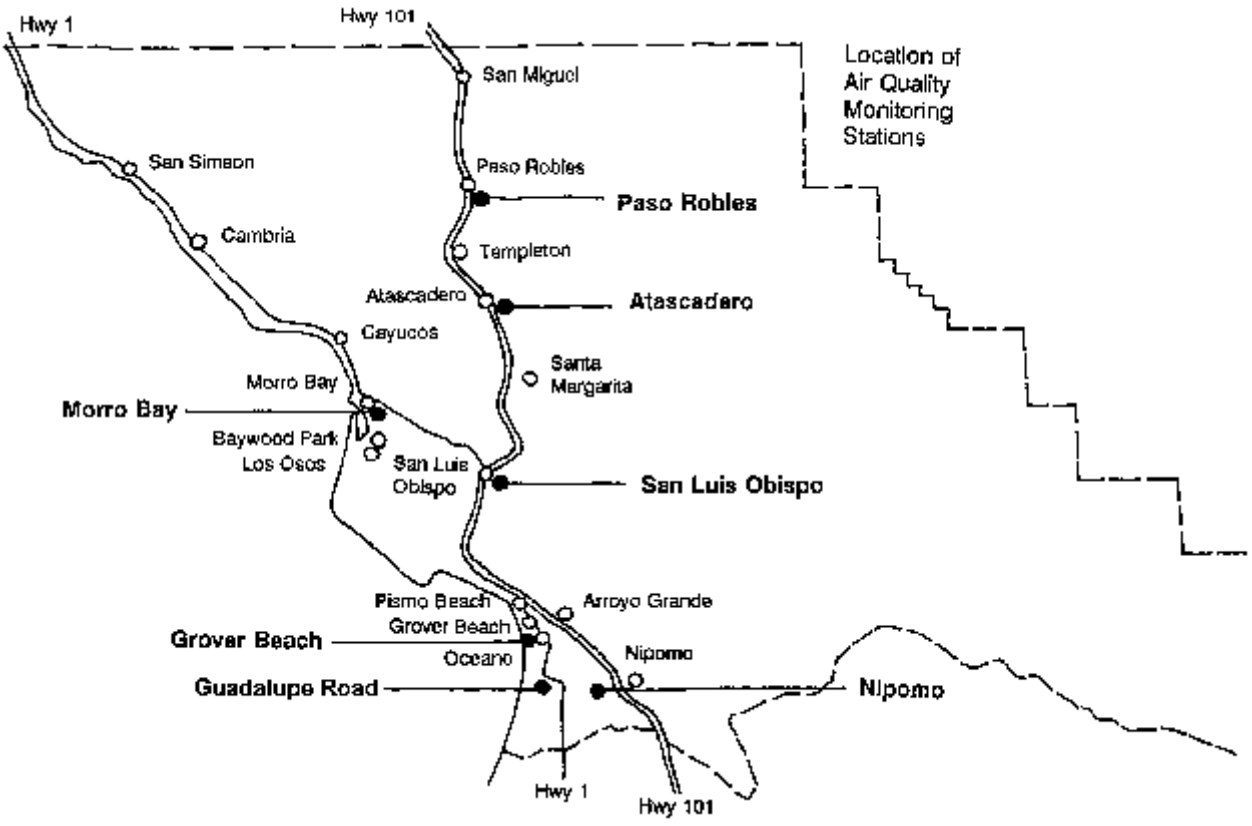
Ozone Ozone is formed in the atmosphere as a byproduct of photochemical reactions between various reactive organic compounds (ROG), oxides of nitrogen (NO_x) and sunlight. The exhaust systems of cars and trucks produce about 50 percent of the county's ROG and NO_x emissions. Other sources include solvent use, petroleum processing, utility and industrial fuel combustion, pesticides and waste burning. The State ozone hourly average standard has been established as 0.09 ppm. Exceedences of the ozone standard since 1990 are summarized in the following table:

OZONE

	Number of Days Exceeding State Standard														
Location	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Atascadero	2	3	2	2	2	1	7	None	2	None	None	None	None	None	None
Morro Bay	None	1	1	None	None	None	None	None	None	1	None	None	None	None	None
Grover Beach	None	None	1	None	None	None	None	None	None	None	None	None	None	None	None
Nipomo	None	None	None	1	None	None	1	None	N/A	None	None	None	None	1	None
Paso Robles	None	None	None	None	1	5	9	None	25	1	None	None	None	1	None

PM10 Particulate matter less than ten microns (PM10) can be emitted directly from a source, and can also be formed in the atmosphere through chemical transformation of gaseous pollutants. Nitrogen oxides and reactive organic gases can both participate in these reactions to form secondary PM10 products. Re-entrained dust from vehicles driving on paved roads is the single largest source of PM10 in the county. Dust from unpaved roads is the county's second largest source of PM10. PM10 measurements throughout the county have exceeded State standards on numerous occasions in the past several years, as indicated in the following table:

PM10															
	Number of Days Exceeding State Standard (PM10 measurements are taken once every six days, or sixty times each year. Thus, a year in which six days had exceedences would have exceedences for 10% of all measured days.)														
Location	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**
Atascadero	3	3	None	5	1	3	None	1	None	None	2	2	2	1	None
Nipomo	3	None	None	1	1	1	None	N/A	None	None	None	2	2	4	2
Paso Robles	N/A	4	2	2	None	3	None	1	1	1	2	2	2	1	None
San Luis Obispo	None	1	None	1	1	1	None	2	None	None	None	None	None	1	None
Ralcoa Way	12	10	8	19	12	14	12	16	12	5	16	17	26	N/A	N/A
Morro Bay	n/a	None	None	2	None	None	None	1	None	None	None	None	1	1	None
Guadalupe Road (Nipomo)	8	10	8	10	6	4	6	5	4	4	7	9	5	4	9



The California Clean Air Act (CCAA) requires the State Air Resources Board (ARB) to designate all counties within the state as either attainment or nonattainment for the state health standards for various air pollutants. Pursuant to that requirement, ARB designated San Luis Obispo County as nonattainment for both ozone and PM10.

After several public hearings before the Planning Commission, on November 7, 1989 the Board of Supervisors found that an RMS Level of Severity II existed for county air quality. That finding was based upon the nonattainment designation made by ARB.

2005 UPDATE

In April 2005 the California Air Resources Board adopted a new, more stringent 8-hour average ozone standard - 0.070 parts per million (compared to the previous standard of 0.090 ppm). The new standard is intended to provide further protection to children, who are particularly vulnerable to the adverse health effects of high ozone levels. Based on preliminary evaluation by the ARB, San Luis Obispo County will likely be designated as "non-attainment" for the State ozone standard. This will require an update to the Clean Air Plan to incorporate new requirements for reducing ozone levels. The official designation is scheduled to occur at the ARB's board meeting in March, 2006. ■

LEVEL OF SEVERITY: II (Certified by the Board of Supervisors)

ACTIONS: The CCAA requires that nonattainment areas reduce their air pollution emissions by at least five percent per year, or fifteen percent averaged over three years, from 1987 baseline emission levels. The law further requires the local Air Pollution Control District (APCD) to adopt a plan to demonstrate how the required reductions will be achieved.
The San Luis Obispo County Clean Air Plan (CAP) was originally adopted by the Board of the Air Pollution Control District in 1992 and subsequently updated. The Plan presents a detailed description of the sources and pollutants impacting the county, future air quality impacts to be expected under current growth trends, and appropriate control strategies for reducing ozone precursor emissions, thereby improving air quality. The County will implement the transportation and land use planning strategies recommended in the CAP through incorporation of these strategies in the county general plan, focusing on the land use and circulation elements and updates of those elements for each of the county's planning areas.

An overall goal of the Clean Air Plan is to reduce the growth of vehicle trips and miles traveled in urban areas to the rate of population growth within San Luis Obispo county. Adoption of the following land use and circulation management policies and programs will assist in reaching this goal:

Planning Compact Communities. In general, the more compact a community is, the lower its vehicle trips and vehicle miles traveled (VMT) and the more convenient it is to use alternative

forms of transportation such as transit, bicycling or walking. Communities should be developed at densities that reduce trips and travel distances and encourage the use of alternative forms of transportation. Urban growth should occur within the urban reserve lines of cities and unincorporated communities. Rural areas should be maintained as very low density residential development (20 acre minimum parcel size), agricultural land and open space.

Providing for Mixed Land Use. As a means of reducing VMT, communities should allow the mixture of land uses that enables people to walk or bicycle to work or to purchase necessary household items at locations convenient to their neighborhood. The mixing of commercial and residential land uses should be encouraged when it will reduce dependence on the automobile, improve the balance between jobs and housing and will not create incompatible land use relationships.

Balancing Jobs and Housing. Job-rich communities, such as San Luis Obispo, have more land allocated for jobs than for housing all those who work there. Conversely, housing-rich communities do not have enough land allocated to provide jobs for all residents. An imbalance between jobs and housing results in longer travel distances between home and work and, consequently, more air pollution from cars. The cities and the county should adopt policies to narrow the gap between the availability of jobs and housing opportunities.

Increasing Transit Use. More people would use public transit if it were more convenient and were recognized as being less expensive than using their private vehicles.. Local planning agencies should encourage transit use by planning neighborhoods and commercial centers to allow for convenient access to and use of local and regional transit systems.

Promoting Bicycling and Walking. Bicycling and walking are types of transportation that cause no air pollution. However, their use in cities can be dangerous when cyclists have to share the road with automobile traffic or when pedestrians have no place to walk but in the street. Providing bike lanes along streets, bike paths separated from streets, secure bicycle parking, showers and lockers at employment sites, and sidewalks or pedestrian trails separated from streets can encourage people to bike or walk. . Planning for existing and new residential and commercial areas should include a safe and interconnected system of bike lanes and paths, sidewalks and pedestrian trails.

Managing Traffic Flow. Roadway improvements should be designed and phased to accommodate projected traffic volumes without providing excess capacity, which would dilute incentives to transit use and ridesharing. Local planning agencies and Caltrans should manage their street systems so that level of service (LOS) "D" or better is maintained during peak commute hours along regional routes connecting communities, and LOS "E" or better is maintained during peak commute hours along arterial streets within communities. Local planning agencies should

manage growth and transportation programs so that the rate of VMT growth does not exceed the rate of population growth. Local planning agencies should require logical street connections within and between cities and other communities in order to provide efficient neighborhood circulation and reduce vehicle travel.

Communication, Coordination and Monitoring. Local jurisdictions, the APCD and the Council of Governments should coordinate actions and cooperate in pursuing the implementation of the land use and circulation management programs proposed in the Clean Air Plan. The countywide Congestion Management Plan should be used as a means to achieve coordinated implementation of these programs.